

California Forestry Association 2007 Annual Meeting

California's Latest Greenhouse Gas Emissions Inventory

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February 1, 2007



Summary

- Types of GHG Inventories
- 1990-2004 GHG Inventory
- Comparison to Climate Action Team (CAT) GHG Inventory
- Forest-related GHG abatement opportunities



Types of GHG Inventories

- “Top-Down” GHG inventory
 - ◆ Sum up activities
 - ◆ Calculate emissions from sums
- “Bottoms-Up” GHG inventory
 - ◆ Calculate detailed emissions at a site
 - ◆ Sum up emissions



GHG Inventory Scope

- Anthropogenic only
- In-State GHG emissions only (does include imported electricity)
- Does not include fuels used in international shipping or travel
- Not a “fuel-cycle” analysis of strategies

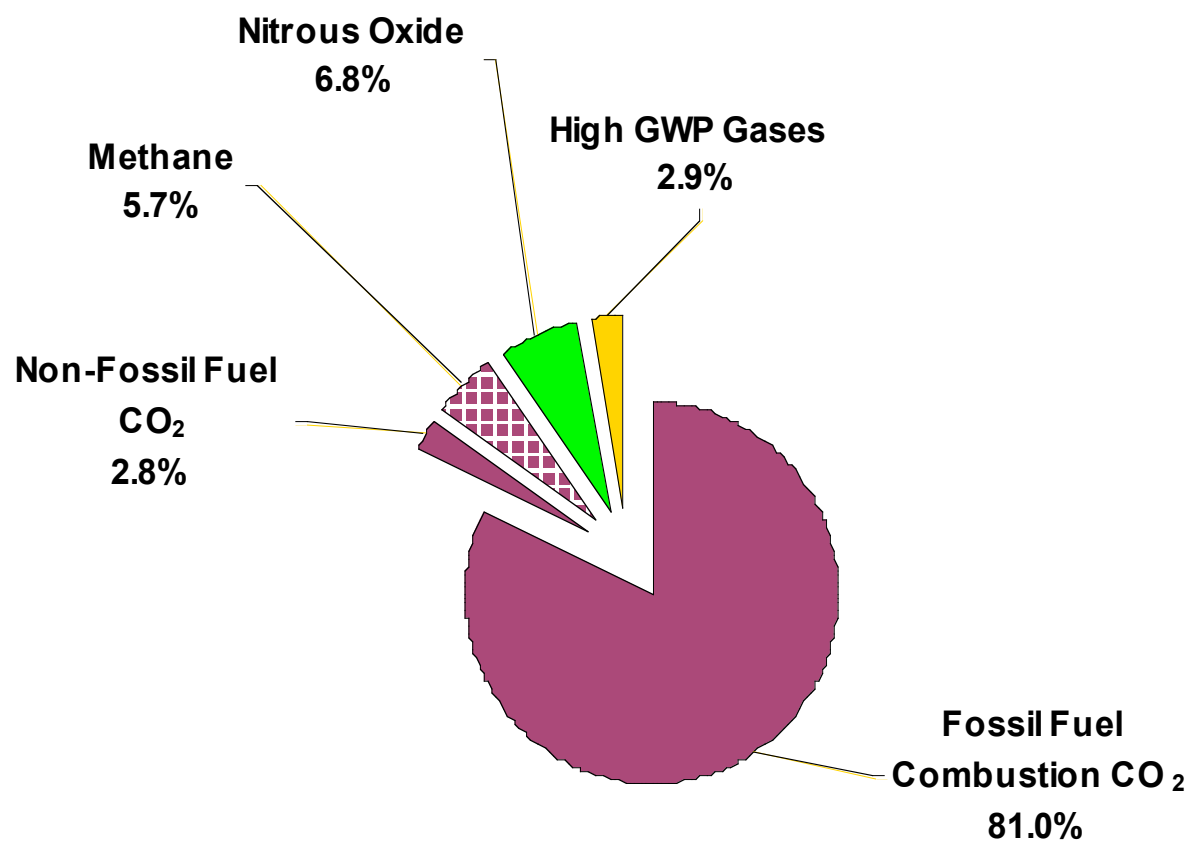


1990-2004 GHG Inventory

- Major gases
- GHG emissions trends
- Major emissions categories



1990-2004 GHG Inventory by Gas



Forest-related GHG Emissions Calculations

Calculations include:

- Sinks (removals) from acreage remaining & growing, continuing to absorb carbon dioxide from atmosphere
- Emissions from reduced acreage of lands devoted to timber, mostly due to fires and harvest (changes in canopy)



Forest Calculations Cause of Change

- Fires
- Harvest
- Development (land conversions)
- Other or unverified

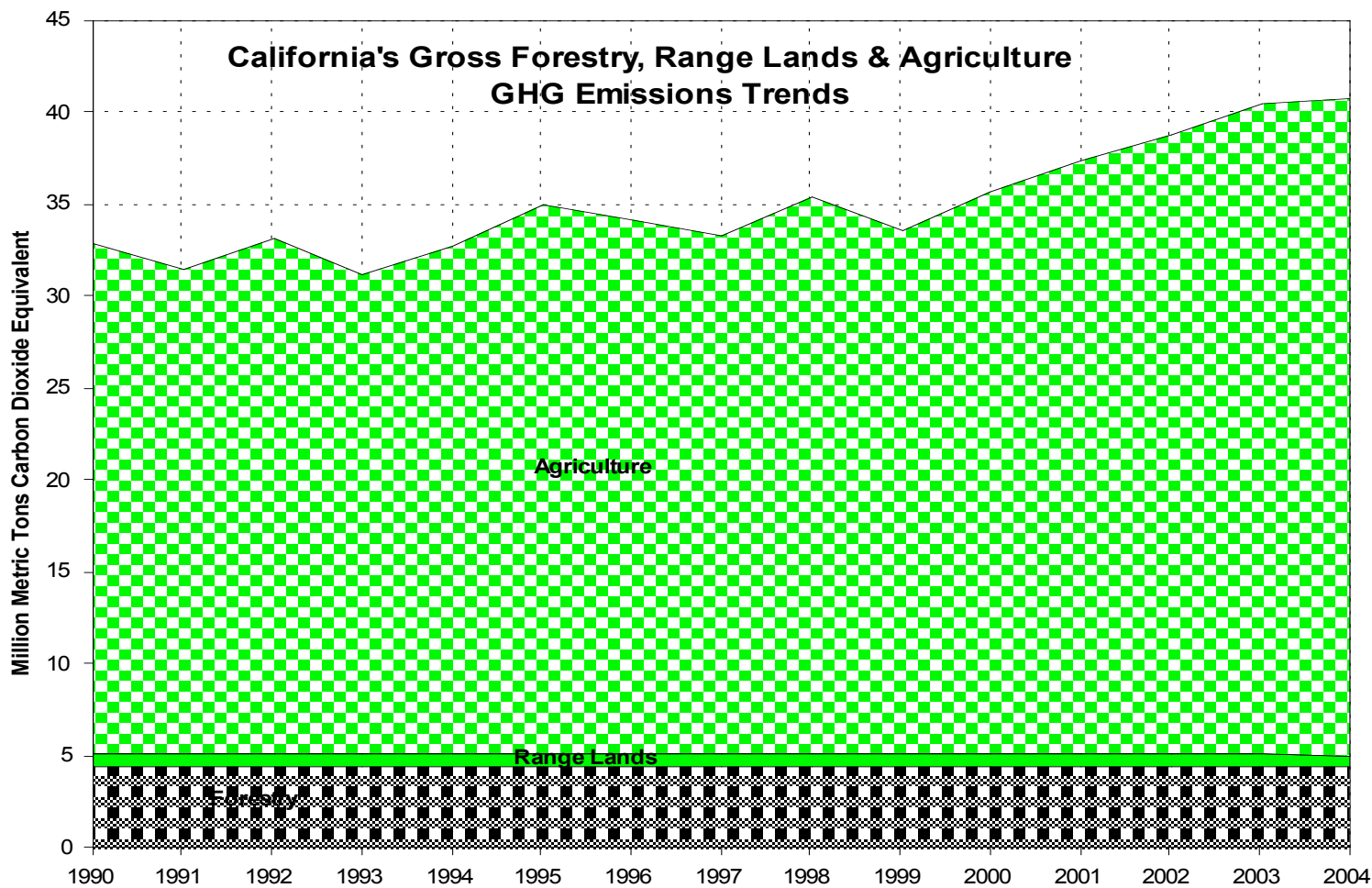


Forest and Range Land Calculations (Emissions and Sinks)

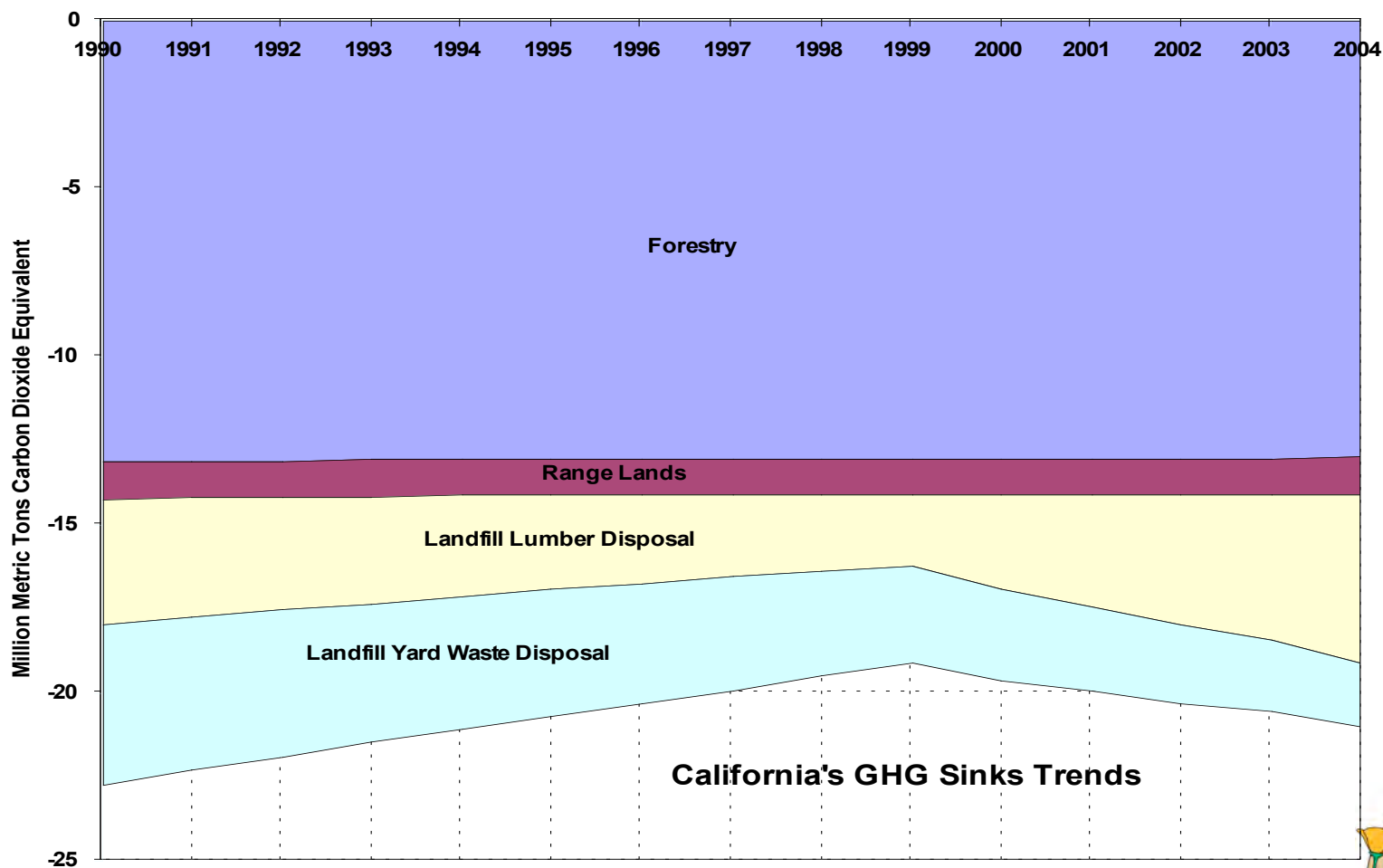
- 1994-2000: Winrock International data (constant @ 1994 value) from Energy Commission's Public Interest Research (PIER) Report
- 1990-93: Extend backward using FRAP value of -0.17%/year
- 2001-04: Extend forward using US Sec. of Ag estimate for Pacific of -0.07%/year



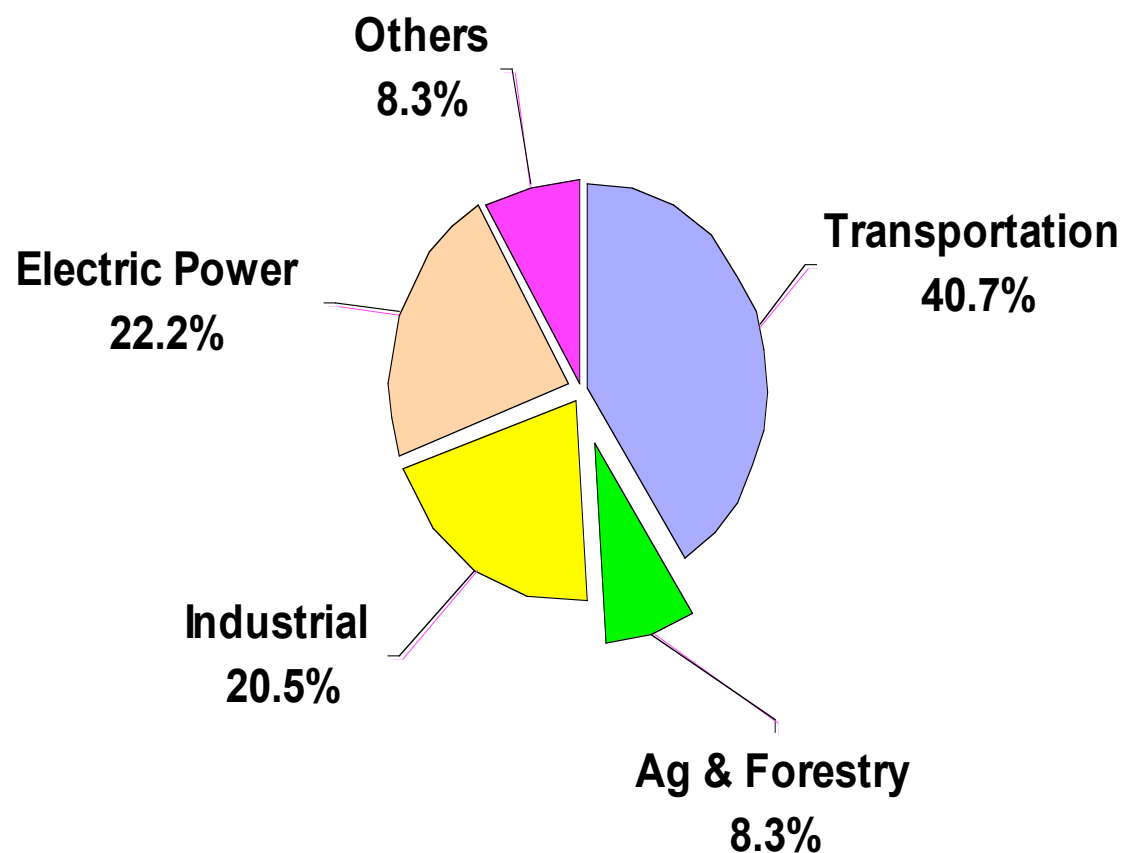
1990-2004 GHG Inventory



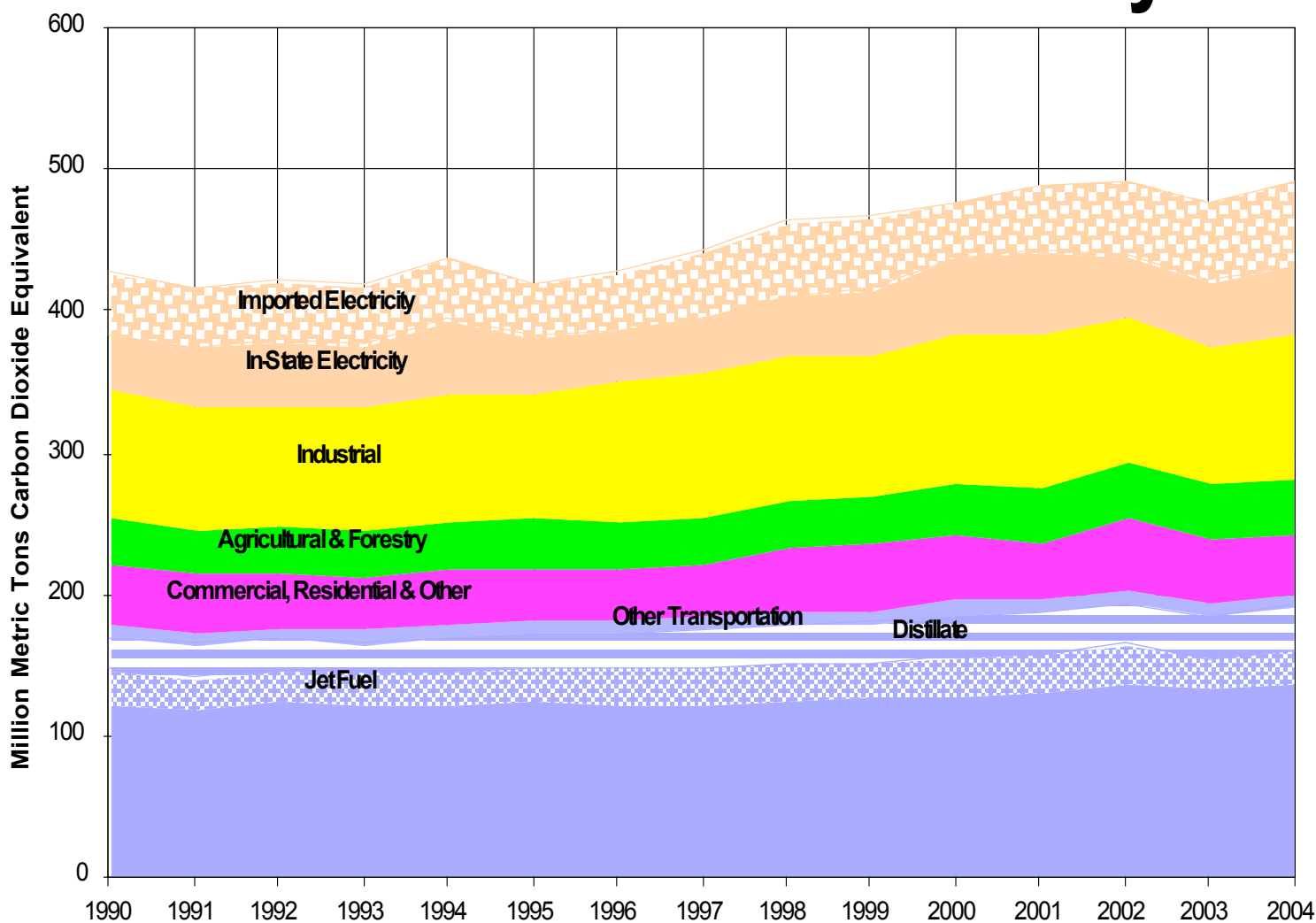
1990-2004 GHG Inventory



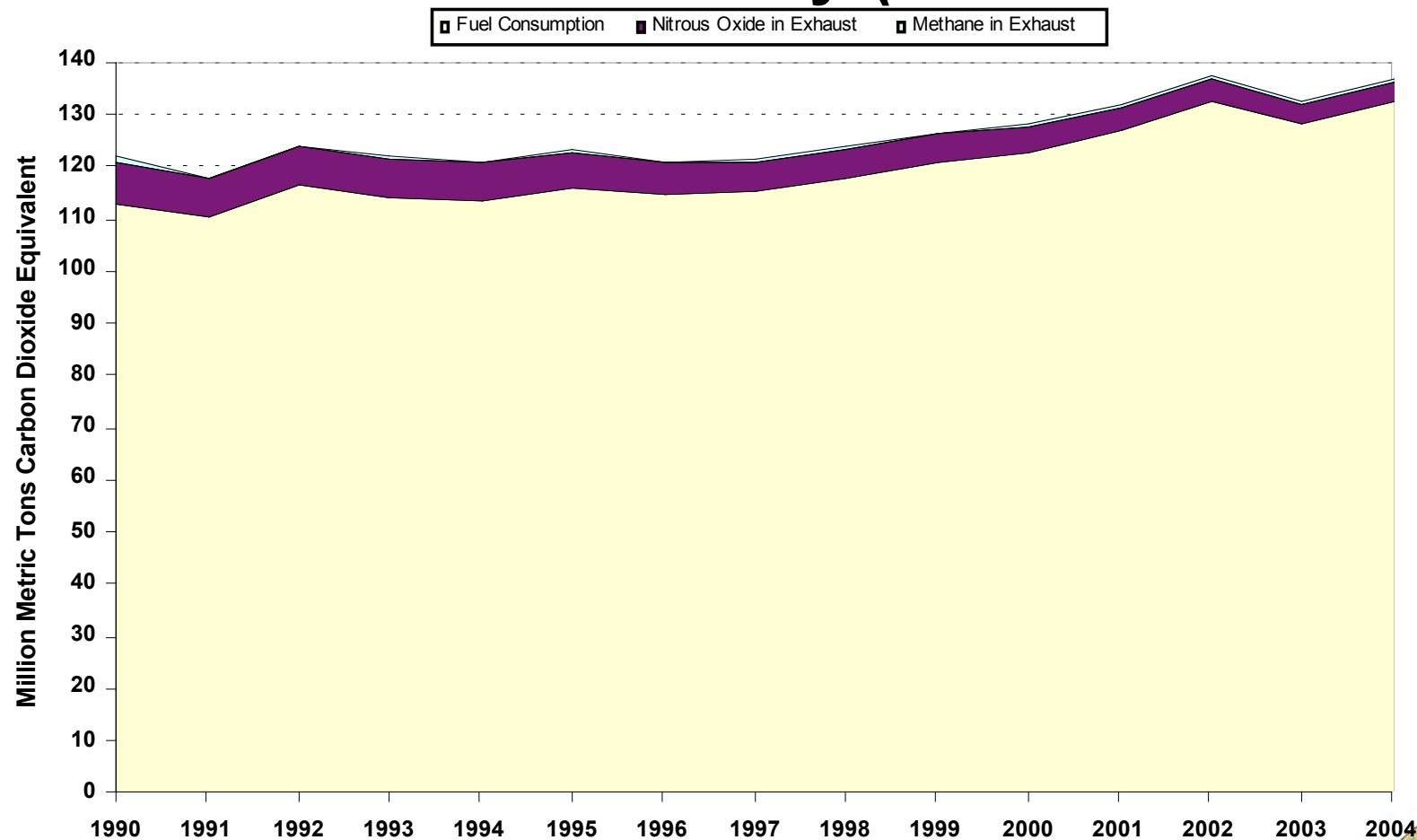
California's 2004 GHG Emissions by Sector



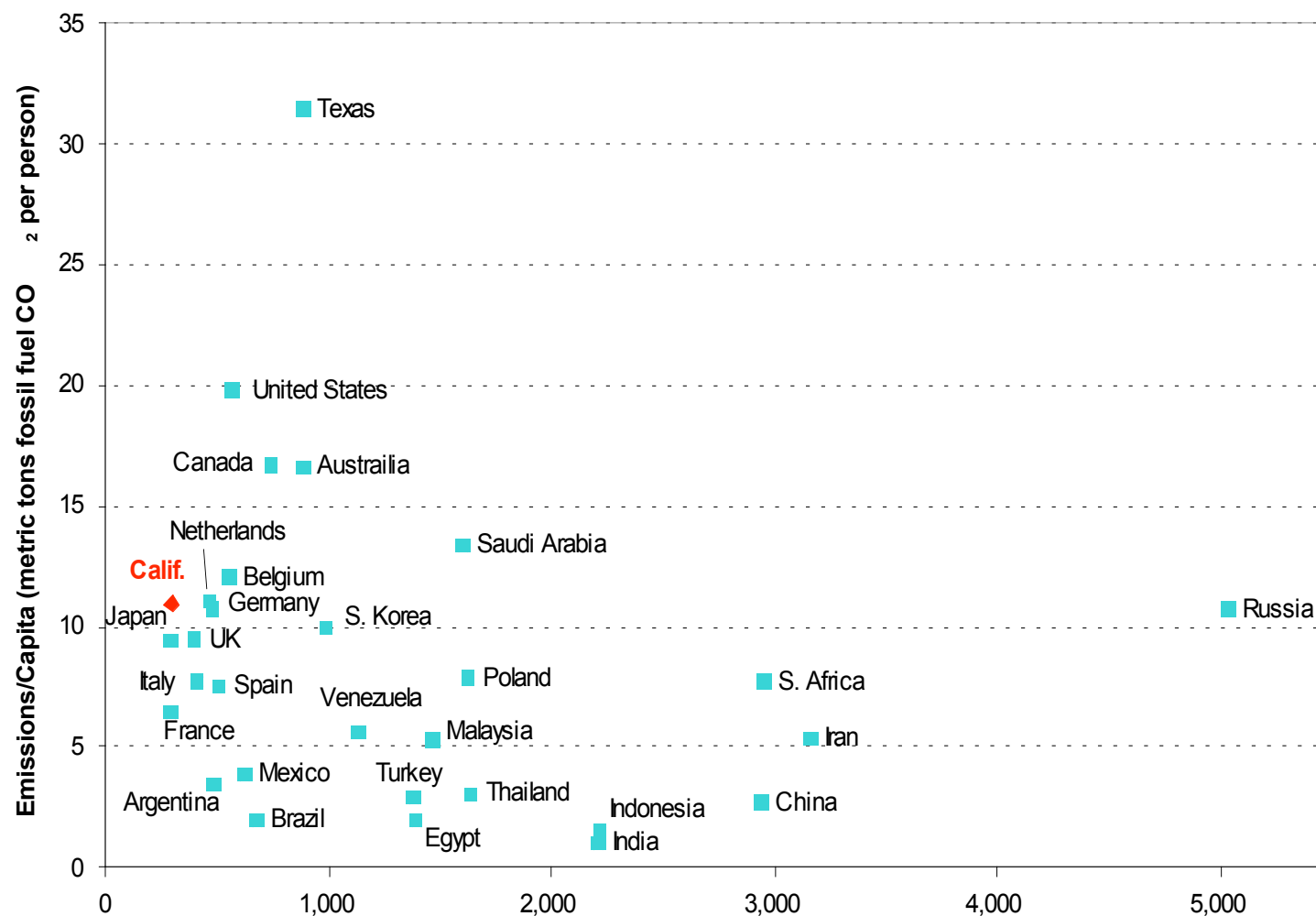
1990-2004 GHG Inventory



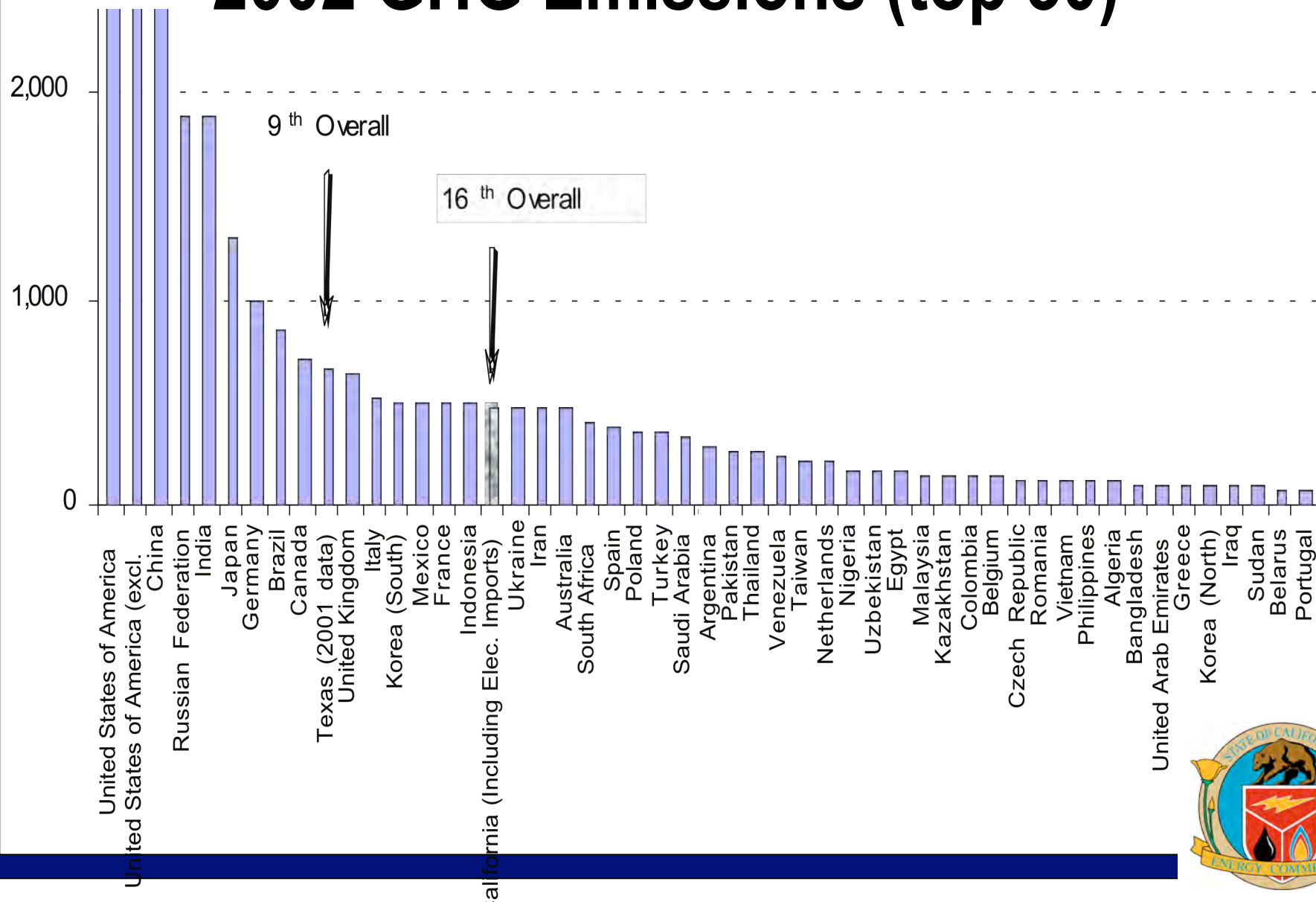
1990-2004 GHG Inventory (Gasoline Trends)



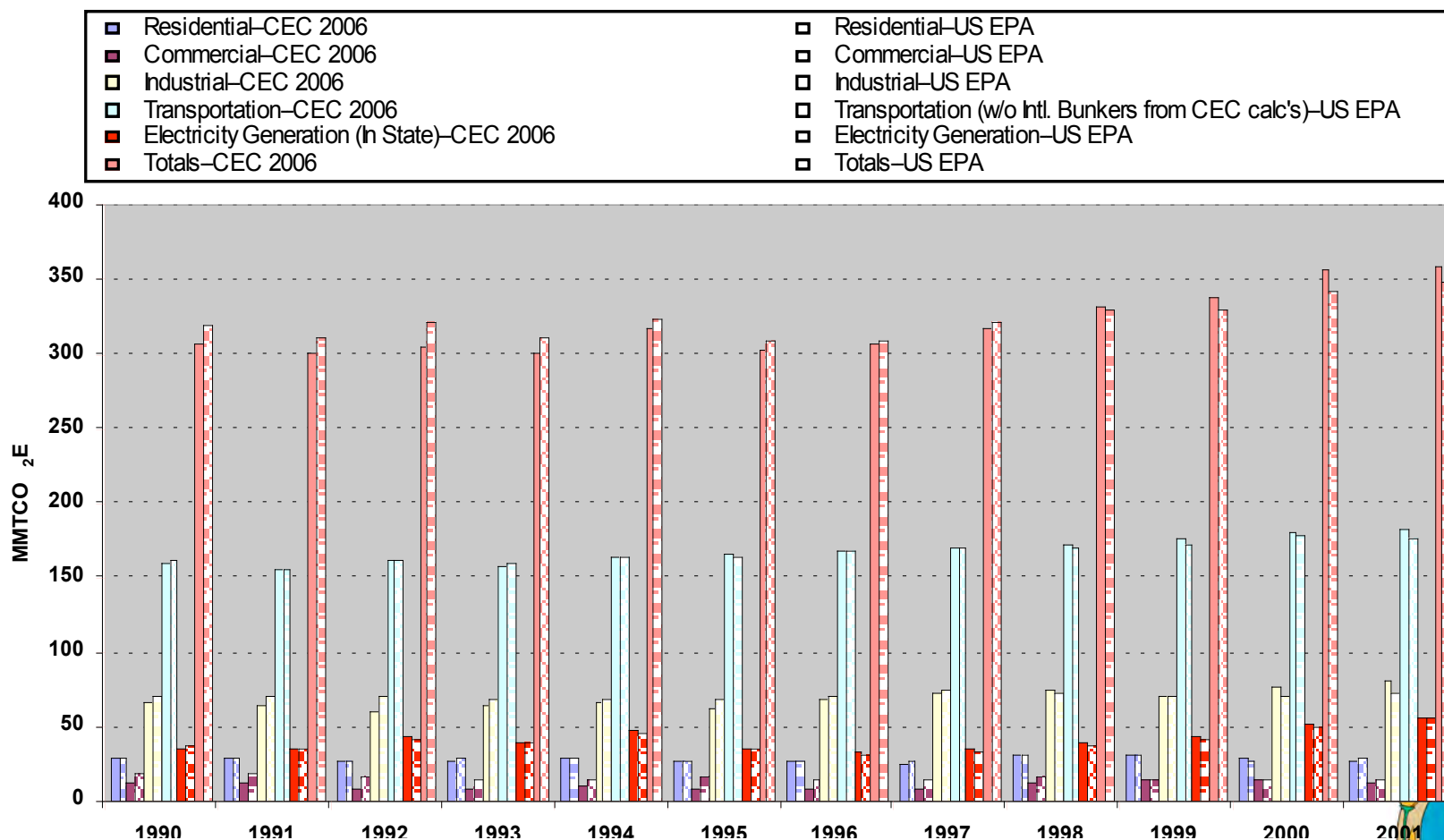
1990-2004 GHG Inventory (fossil fuel portion)



2002 GHG Emissions (top 30)



2006 GHG Inventory to US EPA CA Inventory Comparison (fossil fuels only)

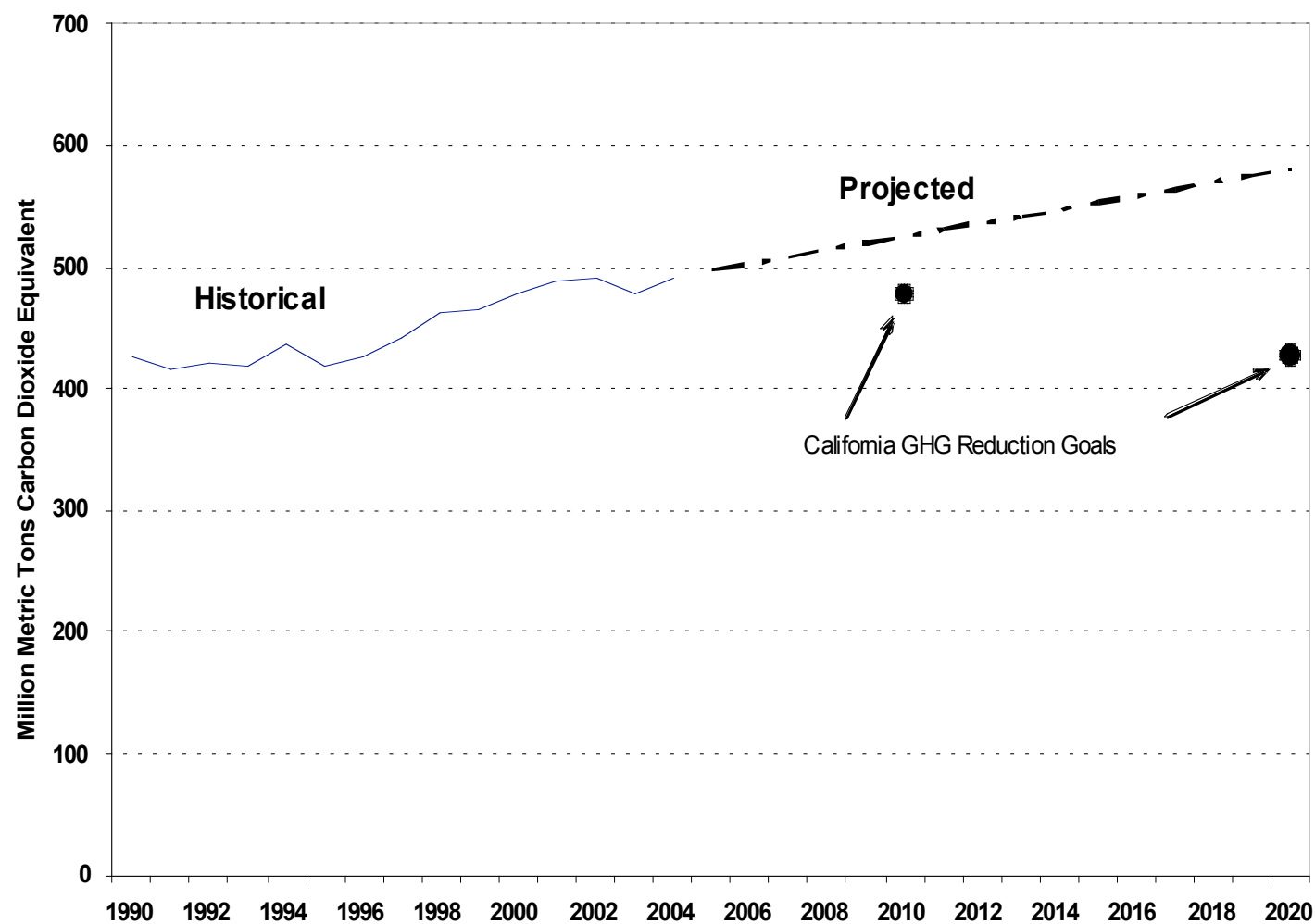


Climate Action Team (CAT)

- Created by Governor's Executive Order S-3-05 on June 1, 2005, with goals to reduce GHG emissions as follows:
 - ◆ Reduce to 2000 by 2010
 - ◆ Reduce to 1990 by 2020
 - ◆ Reduce to 80% below 1990 by 2050



1990-2004 GHG Inventory



Climate Action Team (CAT)

- Composed of executives from:
 - ◆ Business, Transportation & Housing
 - ◆ Department of Food & Agriculture
 - ◆ Resources Agency (includes Dept. of Forestry)
 - ◆ Air Resources Board
 - ◆ Energy Commission
 - ◆ Integrated Waste Management Board
 - ◆ Public Utilities Commission



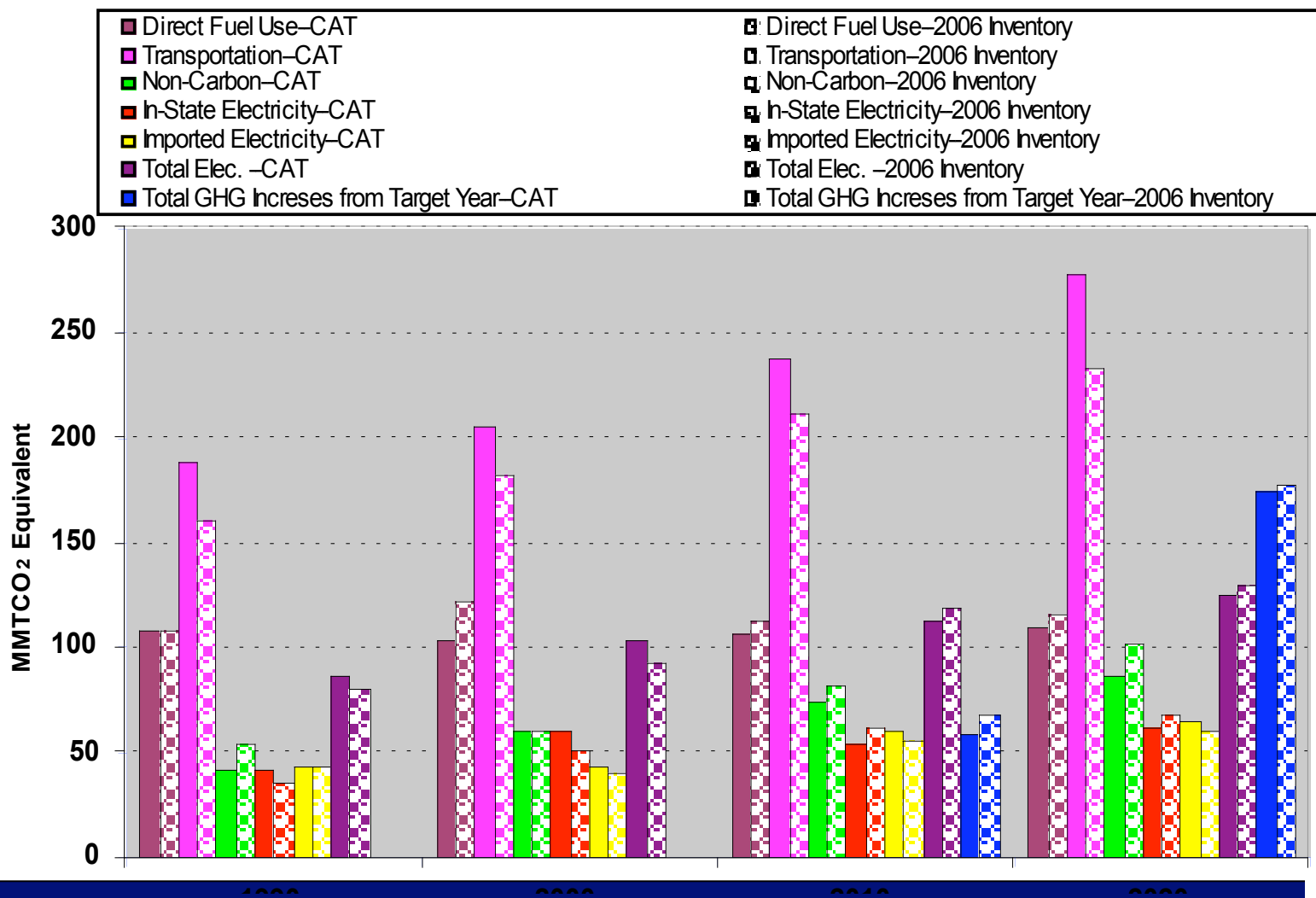
Climate Action Team (CAT)

- Department of Forestry strategies and associated 2020 reductions in million metric tons of carbon dioxide:
 - ◆ Forest management (2-4)
 - ◆ Forest conservation (8.4)
 - ◆ Fuels management/biomass (6.8)
 - ◆ Urban forestry (3.5)
 - ◆ Afforestation/Reforestation (12.5)



2006 Inventory To CAT Inventory Comparison

All GHG Emissions--CAT vs 2006 GHG Inventory



Forest-related Abatement Opportunities

- Reforestation
- Afforestation
- Modified forest management
- Conservation of carbon stocks:
 - ◆ Modify harvest practices
 - ◆ Prevent deforestation
 - ◆ Implement sustainable forest management
 - ◆ Fire suppression & management

Source: Agricultural & Forestlands: U.S. Carbon Policy Strategies, Pew Center on Global Climate Change, page 13



Forest-related Abatement Opportunities (cont'd.)

- Offsite Options:
 - ◆ Wood fuel substitution for fossil fuels
 - ◆ Expanded use of wood products
 - ◆ Extended wood product life
 - ◆ Substitute wood products for concrete or steel
 - ◆ Expanded recycling of wood and paper products

Source: Agricultural & Forestlands: U.S. Carbon Policy Strategies, Pew Center on Global Climate Change, page 13



For More Information:

- Contact Gerry Bemis at 916-654-4960
- Visit the California Climate Change website:
<http://www.climatechange.ca.gov/>

